

Remarks/Arguments

35 U.S.C. §103

Claims 1-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Seo (U.S. Patent No. 6,353,463), in view of Kunishima (U.S. Patent No. 7,158,192).

It is respectfully asserted that neither Seo nor Kunishima, alone or in combination, discloses an apparatus which comprises:

“third AGC means for generating a third AGC signal responsive to at least one of said first and second IF signals within a third bandwidth wherein said third bandwidth is greater than each of said first bandwidth and said second bandwidth,”

as described in currently amended claim 1.

The problem addressed in the subject application is the need to adaptively balance signal-to-noise ratio (SNR) of a desired channel in the presence of potentially large undesired signals in adjacent channels, with tuner linearity. Large undesired signals can cause non-linear distortion in the desired channel due to amplifier overload. Reducing the amplifier gain in response to the large adjacent channel signals results in SNR degradation. This problem is compounded when a tuner must accommodate both digital and analog signals.

To solve this problem, the subject application discloses an apparatus comprising a tuner for generating two IF signals, wherein each IF signal can be used to generate either a wideband or narrowband an IF AGC signal for controlling an AGC controlled amplifier in response to predetermined performance conditions. This solution has the desirable result of creating the flexibility required by multi-signal tuners, as well as reducing the part count required to implement these systems.

Seo teaches a system comprising a digital AGC system and an analog AGC system. More specifically, Seo teaches a “TV receiver for receiving and signal-processing analog and digital broadcasting signals includes a dual tuner and control unit for automatically controlling RF gain of the dual tuner. A controller applies a channel select control signal according to each broadcasting viewing mode to the dual tuner and applies a AGC select signal of each broadcasting mode to a switch. The dual tuner selects a channel of a corresponding broadcasting mode among the received broadcasting signals according to the applied channel select control signal, controls the gain of the RF signal of the selected channel according to an applied automatic gain control signal, and converts the gain-controlled RF signal into an IF signal. A signal distributor identifies and outputs the IF signal output from the dual tuner according to the selected broadcasting mode (analog or digital). An analog processor restores an analog composite video signal from an analog IF signal.” (Seo Abstract)

As admitted by the Office Action, “Seo does not disclose the third AGC means as claimed,” as “Seo’s dual mode receiver is meant for receiving either all digital channels or all analog channels.” Therefore, Seo also fails to disclose an apparatus which comprises “third AGC means for generating a wide band third AGC signal responsive to at least one of said first and second IF signals within a third bandwidth wherein said third bandwidth is greater than each of said first bandwidth and said second bandwidth,” as described in currently amended claim 1.

Kunishima teaches a “high frequency amplifier for amplifying inputted television signals; a mixer for subjecting the television signals which have been amplified to frequency conversion into intermediate frequency signals; a SAW filter for selecting, out of the intermediate frequency signals, intra-range intermediate frequency signals emerging in a range within a prescribed intermediate frequency band; and an intermediate frequency amplifier for amplifying the intra-range intermediate frequency signals are provided, and wide band detecting means for detecting the intermediate frequency signals inputted to the SAW filter and generating a first AGC voltage is provided to control a gain of the high frequency amplifier with the first AGC voltage.” (Kunishima Abstract)

While Kunishima does disclose the use of wideband detecting means for generating an AGC signal, it does not disclose that the generation of that AGC signal is responsive to at least one of two IF signals within a third bandwidth greater than the bandwidth of each of those signals. Furthermore, Kunishima simply fails to disclose a third AGC means. Therefore, Kunishima, like Seo, fails to disclose an apparatus which comprises "third AGC means for generating a third AGC signal responsive to at least one of said first and second IF signals within a third bandwidth wherein said third bandwidth is greater than each of said first bandwidth and said second bandwidth," as described in currently amended claim 1.

In view of the above remarks and amendments to the claims, it is respectfully submitted that there is no 35 USC 112 enabling disclosure provided by Seo or Kunishima alone or in combination, that makes the present invention as claimed in claim 1 unpatentable. It is further submitted that currently amended independent claims 7 and 12 are allowable for at least the same reasons that claim 1 is allowable. Since dependent claims 2-6, 8-11, and 12-16 are dependent from allowable independent claim 1, it is submitted that they too are allowable for at least the same reasons that their respective independent claims are allowable. Thus, it is further respectfully submitted that this rejection has been satisfied and should be withdrawn.

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's representative at (609) 734-6804, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,

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